

In the Claims,

Please amend the claims as follows:

Claim 1 (currently amended): A composition or reaction mixture for performing multi-color real time PCR comprising at least 3 pairs, ~~preferably 4-5 most preferably exactly 4 pairs~~ of FRET hybridization probes, each pair of hybridization probes consisting of a FRET donor probe carrying a FRET donor moiety and a FRET acceptor probe carrying a FRET acceptor moiety having an emission maximum between 550 and 710 nm.

2. (currently amended): A composition or reaction mixture according to claim 1, wherein at least 3, ~~preferably at least 4 and most preferably exactly 4~~ FRET donor moieties are identical.
3. (original): A composition or reaction mixture according to claim 1, wherein all FRET donor moieties are identical.
4. (currently amended): A composition or reaction mixture according to claim 1, wherein at least 3, ~~preferably at least 4 and most preferably exactly 4~~ FRET donor moieties are Fluorescein.
5. (original): A composition or reaction mixture according to claim 1, wherein all FRET donor moieties are Fluorescein.
6. (currently amended): A composition or reaction mixture according to claims 1-5, wherein at least one additional FRET donor moiety is selected from a group consisting of Atto425 and WI343.
7. (currently amended): A composition or reaction mixture according to claims 1-6, wherein one FRET acceptor moiety is selected from a group consisting of LC-Red 705, Cy5.5, and JA286.
8. (currently amended): A composition or reaction mixture according to claims 1-7, wherein at least one, ~~two or three~~ FRET acceptor ~~moieties are~~ moiety is selected from a group consisting of Cy5, LC-Red 640, and LC-Red 610.
9. (currently amended): A composition or reaction mixture according to claims 1 -8, wherein one FRET acceptor moiety is selected from a group consisting of Rh6G and TAMRA.

10. (currently amended): A system for performing multi-color real time PCR, comprising

- a real time PCR instrument, and
- a composition or reaction mixture according to claims 1-9

11. (currently amended): A system according to claim 10, characterized in that said real time PCR instrument comprises

- at least 1 light source, ~~preferably an LED~~
- at least 4 ~~and preferably 5-6~~ fluorescent detector entities, each of said entities having central detection wavelengths which are distinct from each other by at least 25 ~~and preferably at least~~ 30 nm,

~~characterized in that wherein~~ said detector entities are capable of

- simultaneously detecting maximum fluorescence emission of at least 3, ~~preferably 4 and most preferably 5~~ differently labeled FRET Hybridization Probe pairs,
 - simultaneously detecting maximum fluorescence emission of at least 2 differently labeled TaqMan hybridization probes, and
 - detecting maximum fluorescence emission of SybrGreenI
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- means for heating and cooling ~~and~~
 - multiple reaction vessels for containing a reaction mixture.

12. (currently amended): A system according to claim 11, ~~characterized in that wherein~~ said real time PCR instrument comprises exactly one light source.

13. (currently amended): A method for amplifying and detecting multiple target DNA sequences comprising:

- a) providing a composition or reaction mixture according to ~~claims 1-9 claim 1~~,
- b) subjecting said reaction mixture to a thermocycling protocol such that amplification of said multiple target sequences can take place, ~~and~~
- c) monitoring hybridization of each of said pairs of FRET hybridization probes at least once after a plurality of amplification cycles.

14. (original): A method according to claim 13, wherein hybridization is monitored at least once in a temperature dependent manner.
15. (currently amended): A real time PCR instrument comprising
 - at least 1 light source, ~~preferably an LED~~
 - at least 5-6 fluorescent detector entities, each of said entities having central detection wavelengths which are distinct from each other by at least 25 ~~and~~ and ~~preferably at least~~ 30 nm,characterized in that said detector entities are capable of
 - simultaneously detecting maximum fluorescence emission of at least 3; ~~preferably 4 and most preferably 5~~ differently labeled FRET Hybridization Probe pairs,
 - simultaneously detecting maximum fluorescence emission of at least 2 differently labeled TaqMan hybridization probes, and
 - detecting maximum fluorescence emission of SybrGreenI
 - means for heating and cooling, and
 - multiple reaction vessels for containing a reaction mixture.
16. (currently amended): A real time PCR instrument according to claim 15 comprising exactly one light source.
17. (currently amended): An instrument according to claim 15, ~~-16, characterized in that~~ wherein said central detection wavelengths are selected from a group of range of wavelengths, said group consisting of 520-540 nm, 545-565 nm, 570-590 nm, 600-620 nm, 630-650 nm, 660-680 nm, and 700-720 nm.